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FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES

FIT PROJECT

ACF Industries: Houston
105

6-29-83

TASK REPORT TO THE ENVIRONMENTAL PROTECTION AGENCY

CONTRACT NO. 68-01-6692

Preliminary Assessment of the
ACF Industries, Inc. - Amcar Division

TDD #R-07-8303-19

Prepared by: William Kwoka

June 29, 1983

ecology and environment, inc.

International Specialists in the Environmental Science

5158

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SECTION 1: INTRODUCTION

On March 3, 1983, the Ecology & Environment, Inc. (E&E) Field Investigation Team (FIT) was tasked by the U.S. Environmental Protection Agency (USEPA) under Technical Directive Document (TDD) R-07-8303-19 to perform a preliminary assessment of the potential hazards of EPA site number MO-000010465. This site is the location of ACF Industries, Inc. - Amcar Division. Approximately 40 to 60 person hours were allocated for the completion of the task.

SECTION 2: SITE HISTORY

The ACF Industries, Inc. - Amcar Division site is located near the Second and Dorcas Street intersection on the Amcar Division's property, in St. Louis, Missouri. The site coordinates are lattitude 90° 12' 21" and longitude 38° 35' 45".

During the 36 year period from 1945 through 1981 the site was used, by the Amcar Division, to clean stencils on an outdoor "A-frame" structure. The operation used solvents to remove paint which remained on the stencils after each use. Although most of the solvent was recycled, approximately 40% of it was lost through evaporation and splashing. The amount splashed onto the ground was estimated to be 10% of the lost solvent.

Since there were no regulations for such operations until passage of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1980, the practice was thought acceptable. When the CERCLA was passed, ACF Industries, Inc. - Amcar Division filed a CERCLA notification with the USEPA.

A preliminary assessment of the potential hazards of this site is dictated by the lack of controls and the known spillage of hazardous solvents.

SECTION 3: RECEPTORS

This site is in an industrially zoned area of St. Louis, located in the recharge area of the Mississippi River. The site is not a critical environment and is generally inaccessible to the public since it is fenced on all sides with access points manned by guards. The nearest off-site building is to the west and within 300 feet of the site.

Approximately 18 industrial buildings are located within 1,000 feet of the stencil cleaning area ((Ref. 4). The use of the buildings include storage, manufacturing and office space. The buildings are generally constructed with basements (Ref. 6) and are assumed to have an industrial population exceeding 300 persons.

There are no known drinking water wells in the area, but there is a process water intake within one-half mile of the site. The process water is used by the Anheiser Busch Brewing Company.

SECTION 4: PATHWAYS

The Amcar Division site is in the recharge area for the Mississippi River which is approximately 1/3 of a mile to the east (Appendix F or Ref. 4). The highly permeable soil at the site consists of stone and fill on top of river sediments (Ref. 5). A relatively impermeable limestone bedrock underlies the soil at depths ranging from 31 to 60 feet from the surface (Ref. 7).

Groundwater generally is found from 0 to 20 feet below the surface (Ref. 7). Its depth is expected to vary with the level of the river and with precipitation. The net precipitation for the St. Louis area is four inches (Ref. 1).

Soil contamination was observed by Mr. Kwoka (E&E FIT) during the site visit on May 9, 1983. Beneath the A-frame, the soil and paint residues mixture had a strong solvent odor. Paint residues were also observed in portions of the former drum storage area immediately north of the A-frame structure. Since much of the former drum storage area has been covered with stones, the extent of any surface contamination was not evident.

SECTION 5: WASTE CHARACTERISTICS

The Amcar Division kept no records of the solvent quantities spilled during the stencil cleaning process. ACF officials therefore queried several employees and then estimated the total spillage quantities and types. Their estimates are tabulated below (Ref. 2):

Solvent	Gallons	Period
VM&P Naptha	6485	1945-1965
Trichloroethylene	3727	1966-1975
Perchloroethylene	1025	1976-1978
Toluene	397	1979-1981
Acetone	298	1979-1981
Methanol	149	1979-1981
Methylene Chloride	149	1979-1981

Naptha is a somewhat persistent mixture of aliphatic hydrocarbons - primarily pentanes and hexanes. Naptha and toluene are considered to be insoluble in water and of low toxicity (Ref. 3). These compounds have a Sax (Ref. 3) persistence rating of level 1, are less dense than water, have high vapor pressures, and are ignitable. It is therefore possible for the mixture to float as a layer on the groundwater. If that layer contacts the foundation(s) of buildings, the vapor has the potential to penetrate and build up to explosive concentrations.

Trichloroethylene, perchloroethylene, and methylene chloride are all relatively toxic compounds having a Sax

persistence rating of 2. Each of the compounds is more dense than water and should sink towards bedrock. They are considered insoluble in water and therefore disperse slowly into the groundwater.

Methanol and acetone are ignitable, water soluble substances and have Sax persistence ratings of zero. They are readily dissolved and diluted by the groundwater. Methanol has a level 3 toxicity while acetone has a level 1 toxicity (Ref. 1).

In addition, approximately 2 cubic feet of paint sludge is estimated to be on the soil surface. The estimate was made after the site inspection and assumes that one inch of sludge is present over the entire area of the A-frame and sludge storage area. Paint sludge is relatively inert but may be high in heavy metal content which might ultimately reach the groundwater.

No air or water reactive compounds, radioactive compounds, or incompatible compounds were used at this site.

SECTION 6: WASTE MANAGEMENT PRACTICES

This site operated primarily during a time when no regulations for controlling hazardous wastes existed. It was not designed with a liner, leachate collection system or monitoring wells. It is entirely fenced to prevent access to the Amcar Division's manufacturing facilities.

An estimated 12,225 gallons of solvents were spilled over a 36 year period on approximately 0.06 acres of land. The land includes the area under the A-frame and the area adjacent to it which was used to store drums of paint sludge. The solvents spilled did not contain incompatable or air/-water reactive chemicals. No containerized wastes were reported to have been buried on-site.

SECTION 7: CONCLUSIONS AND RECOMMENDATIONS

This inactive site is located in an industrial area of Saint Louis, Missouri along the recharge area for the Mississippi River aquifer.

Groundwater, in this area, is not used for drinking water or agricultural purposes.

Substances spilled at this site include persistent and somewhat persistent solvents which are toxic and/or ignitable. The ignitable solvents can float on the groundwater and could present an explosion hazard to buildings where foundations encounter the groundwater. It is recommended that additional work be performed to determine: 1) the concentrations and types of solvents remaining in/on the groundwater and soil, 2) direction of groundwater flow, and 3) the concentrations of solvent vapors in nearby buildings.

Using the "Methodology for Rating the Hazard Potential of Waste Disposal Sites", by JRB Associates, Inc., this site has a very low absolute level of hazard and a low to medium priority for future investigation.

APPENDICES

1. Cost Center	REM/FIT ZONE II CONTRACT CONTRACT NO. 68-01-6692 TECHNICAL DIRECTIVE DOCUMENT (TDD)	2.
CH633-7		No. R-7-8303-19
1A. Account No.		

3. Priority:	4. Estimate of Technical Hours	5. EPA Site ID	6. Completion Date:	7. Reference Info:
☐ High	40-60*	MO-000010465	6-30-83	☐ Yes ☒ No
☐ Medium	4A. Estimate of Subcontract Cost	5A. EPA Site Name		☐ Attached
☒ Low	NA	ACF Industries, Inc.		☒ Pick Up

8. General Task Description: Perform a preliminary assessment of the ACF Industries, Inc., St. Louis, MO.

9. Specific Elements:

1) Pickup available files at the regional office

*2) Perform an on-site inspection only if necessary

3) No sampling is authorized

10. Interim Deadlines

11. Desired Report Form: ☒ Formal Report ☐ Letter Report ☐ Formal Briefing

Other (Specify):

12. Comments:

13. Authorizing RPO: William J. Wolfe (Signature)

14. Date: 3/03/83

15. Received By: ☒ Accepted ☐ Accepted with Exceptions ☐ Rejected

Jim Buchanan (Contractor RPM Signature)

16. Date: 3/31-83

Sheet 1 White – RPM Copy
Sheet 2 Green – RPO Copy
Sheet 3 Canary – ZPM Copy
Sheet 4 Pink – Project Officer Copy
Sheet 5 Goldenrod – AZPM - FIT Copy

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (To be assigned by HQ)
VII	MOD006280119

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
AFC Industries - Amcar Div.	2800 DeKalb St.		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
St. Louis	MO	63118	St. Louis

G. OWNER/OPERATOR *(If known)*

1. NAME	2. TELEPHONE NUMBER
Donald Pulliam (Plant Manager)	(314) 773-8870

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

Railroad car manufacturing facility

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*	K. DATE IDENTIFIED *(mo., day, & yr.)*
Superfund notification	6/8/81

L. PRINCIPAL STATE CONTACT

1. NAME	2. TELEPHONE NUMBER
N.A.	

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☒ 2. MEDIUM ☐ 3. LOW ☐ 4 NONE ☐ 5 UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☒ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
William Kwoka	(913) 371-3213	June 17, 1983

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.)*

☒ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(In acres)*	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES	
	1. LATITUDE *(deg.-min.-sec.)*	2. LONGITUDE *(deg.-min.-sec.)*
Less than 1 acre	90° 12' 21"	38° 35' 45"

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES *(specify)*: manufacturing facility about 25 buildings

T2070-2 (10-79)

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
1. RAIL	1. PILE	1. FILTRATION	1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	3. DRUMS	3. VOLUME REDUCTION	X 3. OPEN DUMP *
4. TRUCK	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify):
		9. OTHER (specify):	* spillage onto ground

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

spilled solvents while cleaning paint from stencils

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☐ 3. SOLID ☒ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☒ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify): _____

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

No

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: 2	AMOUNT: none	AMOUNT: 12,225	AMOUNT: none	AMOUNT: none	AMOUNT: none
UNIT OF MEASURE: cubic feet	UNIT OF MEASURE:	UNIT OF MEASURE: gal.	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:
		X (1) HALOGENATED SOLVENTS			
		X (2) NON-HALOGNTD. SOLVENTS			
		(3) OTHER (specify): about 4900 gal. halogenated; about 7325 non-halogenated			

a. SLUDGE	b. OIL	d. CHEMICALS	e. SOLIDS	f. OTHER
X (1) PAINT, PIGMENTS	(1) OILY WASTES	(1) ACIDS	(1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE		(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):		(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
		(6) CYANIDE	(6) OTHER (specify):	
		(7) PHENOLS		
		(8) HALOGENS		
		(9) PCB		
		(10) METALS		
		(11) OTHER (specify)		

Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

VM & P Naptha
Trichloroethylene

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				none known
3. NON-WORKER INJURY/EXPOSURE				none known
4. WORKER INJURY				none known
5. CONTAMINATION OF WATER SUPPLY				none known
6. CONTAMINATION OF FOOD CHAIN				none known
7. CONTAMINATION OF GROUND WATER	X			probable due to porous soil
8. CONTAMINATION OF SURFACE WATER	X			
9. DAMAGE TO FLORA/FAUNA				none
10. FISH KILL				none
11. CONTAMINATION OF AIR				none
12. NOTICEABLE ODORS				none
13. CONTAMINATION OF SOIL		X		observed 5/9/83 reported spillage onto ground
14. PROPERTY DAMAGE				none
15. FIRE OR EXPLOSION	X			travels on groundwater potentially explosive vapors
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS		X	1945-1981	
17. SEWER, STORM DRAIN PROBLEMS				none known
18. EROSION PROBLEMS				none
19. INADEQUATE SECURITY				fenced with guard station
20. INCOMPATIBLE WASTES				none
21. MIDNIGHT DUMPING				none
22. OTHER (specify):				

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☒ 3. STATE PERMIT (specify): HWG-6, HWG-1
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☒ 10. OTHER (specify): MOD006280119

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☒ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

RATING FORM FOR WASTE DISPOSAL SITES

NAME OF SITE ACF Industries, Inc.-Amcar Div. (ACTIVE) INACTIVE INACTIVE AND ABANDONED (CIRCLE ONE)

LOCATION St. Louis, Missouri

OWNER/OPERATOR ACF Industries

COMMENTS: This site is the result of solvent spillage during stencil cleaning over a thirty-eight year period.

PREPARED BY: William Kwoka ON May 19 19 83

RATING FACTOR	SOURCE AND BASIS OF INFORMATION	SITE RATING (CIRCLE ONE)				MULTIPLIER	SITE SCORE	MAXIMUM POSSIBLE SCORE
RECEPTORS								
POPULATION WITHIN 1,000 FEET	Estimate 300 industrial population = 300/3=100	0	1	(2)	3	12	24	36
DISTANCE TO NEAREST DRINKING-WATER WELL	Area served by city water assumed	(0)	1	2	3	8	0	24
DISTANCE TO NEAREST OFF-SITE BUILDING	~300 ft. observed	0	1	2	(3)	8	24	24
LAND USE/ZONING	industrial	0	1	(2)	3	6	12	18
CRITICAL ENVIRONMENTS	none	(0)	1	2	3	6	0	18
ADDITIONAL POINTS FOR OTHER RECEPTORS	recharge area 5						5	50
						SUBTOTALS	65	170
NUMBER OF MISSING AND ASSUMED VALUES = 1 OUT OF 5.								
PERCENTAGE OF MISSING AND ASSUMED VALUES = 20 %.						SUBSCORE (SITE SCORE DIVIDED BY MAXIMUM SCORE AND MULTIPLIED BY 100)		38.2
PATHWAYS								
EVIDENCE OF CONTAMINATION	Odors + paint sludge obs.	0	1	(2)	3	2	4	6
LEVEL OF CONTAMINATION	Soil wet - odors strong	0	1	2	(3)	7	21	21
TYPE OF CONTAMINATION	Soil contamination observed Gnd water contam. prob.	0	1	2	(3)	5	15	15
DISTANCE TO NEAREST SURFACE WATER	USGS ~1400 feet Topographic map	0	1	(2)	3	8	16	24
DEPTH TO GROUNDWATER	0-20 feet + 4 inches	0	1	2	(3)	7	21	21
NET PRECIPITATION	JRB manual	0	(1)	2	3	6	6	18
SOIL PERMEABILITY	Riverbed overlain with fill & rock	0	1	2	(3)	6	18	18
BEDROCK PERMEABILITY	Relatively impermeable St. Louis limestone	0	(1)	2	3	4	4	12
DEPTH TO BEDROCK	31-60 feet	0	(1)	2	3	4	4	12
ADDITIONAL POINTS FOR OTHER PATHWAYS							0	25
						SUBTOTALS	109	172
NUMBER OF MISSING AND ASSUMED VALUES = 0 OUT OF 9.								
PERCENTAGE OF MISSING AND ASSUMED VALUES = 0 %.						SUBSCORE (SITE SCORE DIVIDED BY MAXIMUM SCORE AND MULTIPLIED BY 100)		63.4

NAME OF SITE ACF Industries - Amcar Div.

WASTE CHARACTERISTICS

TOXICITY	Trichloroethylene Perchloroethylene	0	1	(2)	3	7	14	21
RADIOACTIVITY	None	(0)	1	2	3	7	0	21
PERSISTENCE	JRB	0	1	(2)	3	5	10	15
IGNITABILITY	Acetone, Toluene, Methanol	0	1	2	(3)	3	9	9
REACTIVITY	JRB	(0)	1	2	3	3	0	9
CORROSIVENESS		(0)	1	2	3	3	0	9
SOLUBILITY	Acetone, Methanol	0	1	2	(3)	4	12	12
VOLATILITY	Acetone	0	1	2	(3)	4	12	12
PHYSICAL STATE	Liquid	0	1	(2)	3	4	8	12
ADDITIONAL POINTS FOR OTHER WASTE CHARACTERISTICS	Trichloroethylene is carcinogenic 2 Methyl ethyl ketone-teratogenic 2						4	20
						SUBTOTALS	67	140

NUMBER OF MISSING AND ASSUMED VALUES = 0 OUT OF 9.

PERCENTAGE OF MISSING AND ASSUMED VALUES = 0 %.

SUBSCORE (SITE SCORE DIVIDED BY MAXIMUM SCORE AND MULTIPLIED BY 100.) 47.9

WASTE MANAGEMENT PRACTICES

SITE SECURITY	Fenced & security guard	(0)	1	2	3	7	0	21
HAZARDOUS WASTE QUANTITY	Estimate 12-25 gal.	0	(1)	2	3	7	7	21
TOTAL WASTE QUANTITY	0.06 acre depth unknown	(0)	1	2	3	5	0	15
WASTE INCOMPATIBILITY	none	(0)	1	2	3	5	0	15
USE OF LINERS	none used	0	1	2	(3)	3	9	9
USE OF LEACHATE COLLECTION SYSTEMS	no leachate collection	0	1	2	(3)	3	9	9
USE OF GAS COLLECTION SYSTEMS	not applicable	0	1	2	3	2	-	~~6~~
USE AND CONDITION OF CONTAINERS	no containerized waste	0	1	2	(3)	2	6	6
ADDITIONAL POINTS FOR OTHER WASTE MANAGEMENT PRACTICES							0	30
						SUBTOTALS	31	126

NUMBER OF MISSING AND ASSUMED VALUES = 0 OUT OF 8.

PERCENTAGE OF MISSING AND ASSUMED VALUES = 0 %

SUBSCORE (SITE SCORE DIVIDED BY MAXIMUM SCORE AND MULTIPLIED BY 100) 24.6

NUMBER OF MISSING AND ASSUMED VALUES = 1 OUT OF 31.

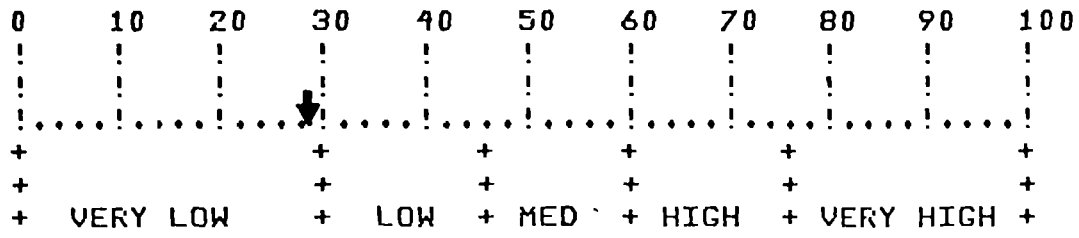
PERCENTAGE OF MISSING AND ASSUMED VALUES = 3.2 %

TOTAL SITE SCORE 170.5

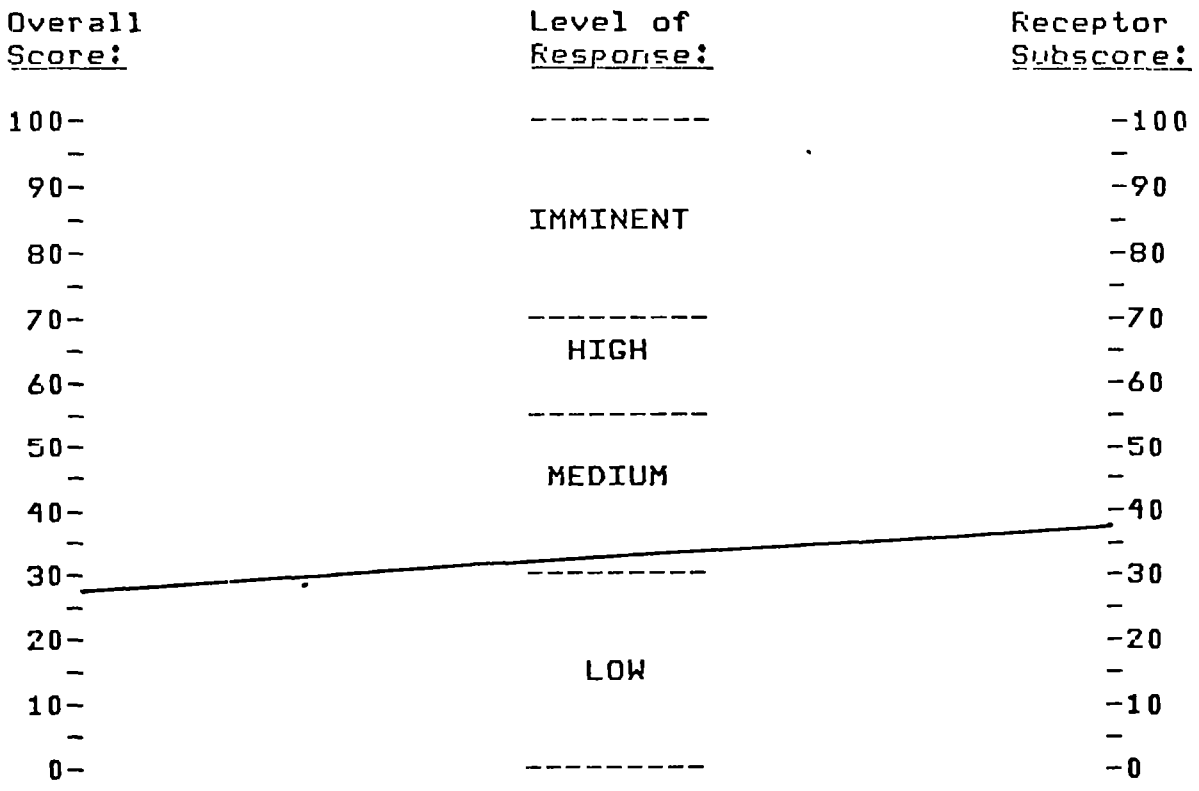
TOTAL MAXIMUM POSSIBLE SITE SCORE 608

OVERALL SCORE 28.4
(TOTAL SCORE DIVIDED BY MAXIMUM SCORE AND MULTIPLIED BY 100)

ABSOLUTE LEVEL OF HAZARD



APPROPRIATE LEVEL OF RESPONSE



Source: "Methodology for Rating the Hazard Potential of Waste Disposal Sites" by JRB Associates, 1980.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by HQ)
7	MO-000010465

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition *(Section II)*. File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
ACF Industries, Inc. Amcar Div.	2800 Dekalb St.		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
St. Louis, [illegible]	MO	63118	St. Louis

G. SITE OPERATOR INFORMATION

1. NAME		2. TELEPHONE NUMBER	
Don Pulliam		(314) 773-8870	
3. STREET	**4. CITY**	**5. STATE**	**6. ZIP CODE**

H. REALTY OWNER INFORMATION *(if different from operator of site)*

1. NAME		2. TELEPHONE NUMBER	
3. CITY		**4. STATE**	**5. ZIP CODE**

I. SITE DESCRIPTION

Railroad car manufacturing facility

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION *(complete this section last)*

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)	B. APPARENT SERIOUSNESS OF PROBLEM
May 19, 1983	☐ 1. HIGH ☒ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
William Kwoka	(913) 371-3213	May 19, 1983

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE	
William Kwoka	Field Investigator	
3. ORGANIZATION		**4. TELEPHONE NO. (area code & no.)**
Ecology & Environment, Inc.		(913) 371-3213

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
D.R. Pulliam	ACF Industries, Inc.	(314) 773-8870
B.H. Cecil	" "	(314) 334-4685
R.D. Hart	" "	(314) 334-4201

C. SITE REPRESENTATIVES INTERVIEWED *(corporate officials, workers, residents)*

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
D.R. Pulliam	Plant Manager (314) 773-8870	
R.D. Hart	(314) 334-4201	

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
ACF Industries	(314) 773-8870	2800 Dekalb St., St. Louis, MO.	Solvents

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
None			

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS
N/A		

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY (credentials must be shown in all cases)
5-4-83	1200 hours	[x] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER		No samples taken	
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
Visual inspection only		

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: ☐ a. GROUND ☐ b. AERIAL
2. PHOTOS IN CUSTODY OF: None

D. SITE MAPPED?

☒ YES. SPECIFY LOCATION OF MAPS: EPA file

E. COORDINATES

1. LATITUDE (deg.-min.-sec.): 90° 12' 21"
2. LONGITUDE (deg.-min.-sec.): 38° 35' 45"

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☒ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.) No longer use. Have replaced with a new stencil booth in paint shop

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code): _____

C. AREA OF SITE (in acres)

48 acre plant ~0.06 contaminated

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify): Several paint shop and ACF offices as well as manufacturing buildings.

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY	X	8. OTHER (specify) spillage of solvents onto ground
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for.. NA

☐ 1. STORAGE ☐ 2. INCINERATION ☐ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☒ 1. LIQUID ☐ 2. SOLID ☒ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☐ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE

☒ 5. TOXIC ☐ 6. REACTIVE ☐ 7. INERT ☒ 8. FLAMMABLE

☐ 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

No records available

Continued From Front

VII. WASTE RELATED INFORMATION (continued)

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: unknown	AMOUNT: none	AMOUNT: est. 12225	AMOUNT: none	AMOUNT: none	AMOUNT: none
UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE: gallons	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	X (2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify): Trichloroethylene, Perchloroethylene, Methylene chloride, Acetone, Methanol, Toluene	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify)
			(6) CYANIDE	(6) OTHER (specify)	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify):		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X') a. SOLID	b. LIQ.	c. VAPOR	3. TOXICITY (mark 'X') a. HIGH	b. MED.	c. LOW	d. NONE	4. CAS NUMBER	5. AMOUNT	6. UNIT
Trichloroethylene		x							3700	gal
Perchloroethylene		x							1025	gal
VM+P Naptha		x							6500	gal
Methylene Chloride		x							150	gal
Methanol		x							150	gal
Toluene		x							400	gal
Acetone		x							300	gal

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☒ A. HUMAN HEALTH HAZARDS The stencil cleaning was done in a fenced area. So there is no direct contact with the public. The soil appeared to be saturated with solvent at the time of inspection. Since the solvents have entered the soil there is not direct explosion hazard. No flammable materials were near the contaminated soil, so fire is not believed to be a serious threat. It is possible that the solvents can enter through the foundation of building and cause a fire or explosion hazard.

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

None

☐ C. WORKER INJURY/EXPOSURE

None

☐ D. CONTAMINATION OF WATER SUPPLY

None known

☐ E. CONTAMINATION OF FOOD CHAIN

None known

☒ F. CONTAMINATION OF GROUND WATER

High probable. Spillage occurred onto highly permeable soil

☒ G. CONTAMINATION OF SURFACE WATER

Possible. The solvents have contaminated soil in the recharge area for the Mississippi River.

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

None apparent

☐ I. FISH KILL

None

☐ J. CONTAMINATION OF AIR

No

☒ K. NOTICEABLE ODORS

Noticeable odors if the soil was disturbed and then smelled.

☒ L. CONTAMINATION OF SOIL

Soil contamination was visually evident. Surface soil had a strong solvent odor and felt wet to the touch.

☐ M. PROPERTY DAMAGE

No

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

Not directly. Solvents can travel underground and then enter buildings to cause fire or explosion hazard.

☒ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

Site caused by splashing/spillage during stencil cleaning operation.

☐ P. SEWER, STORM DRAIN PROBLEMS

No

☐ Q. EROSION PROBLEMS

No

☐ R. INADEQUATE SECURITY

Area is fenced. Guard at entrance

☐ S. INCOMPATIBLE WASTES

No

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

No

☐ U. OTHER (specify)

No

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	None			
2. IN COMMERCIAL OR INDUSTRIAL AREAS		300	25	1000 feet
3. IN PUBLICLY TRAVELLED AREAS	None			
4. PUBLIC USE AREAS (parks, schools, etc.)	None			

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
0-20 ft.	Generally to south/southeast	industrial/agricultural
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
	Greater than 5 miles	South

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS ☒ 2. COMMUNITY > 15 CONNECTIONS (specify town): City of St. Louis

☐ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
		None known - area served by city water		

I. RECEIVING WATER

1. NAME: Mississippi River

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

Recreational, agricultural, drinking water

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☒ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND		St. Louis limestone		overburden is combination of rock an fill material on alluvial
	2. CLAY				soil
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☒ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: less than 2%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: appears to be flat

J. OTHER GEOLOGICAL DATA

XIV. PERMIT INFORMATION

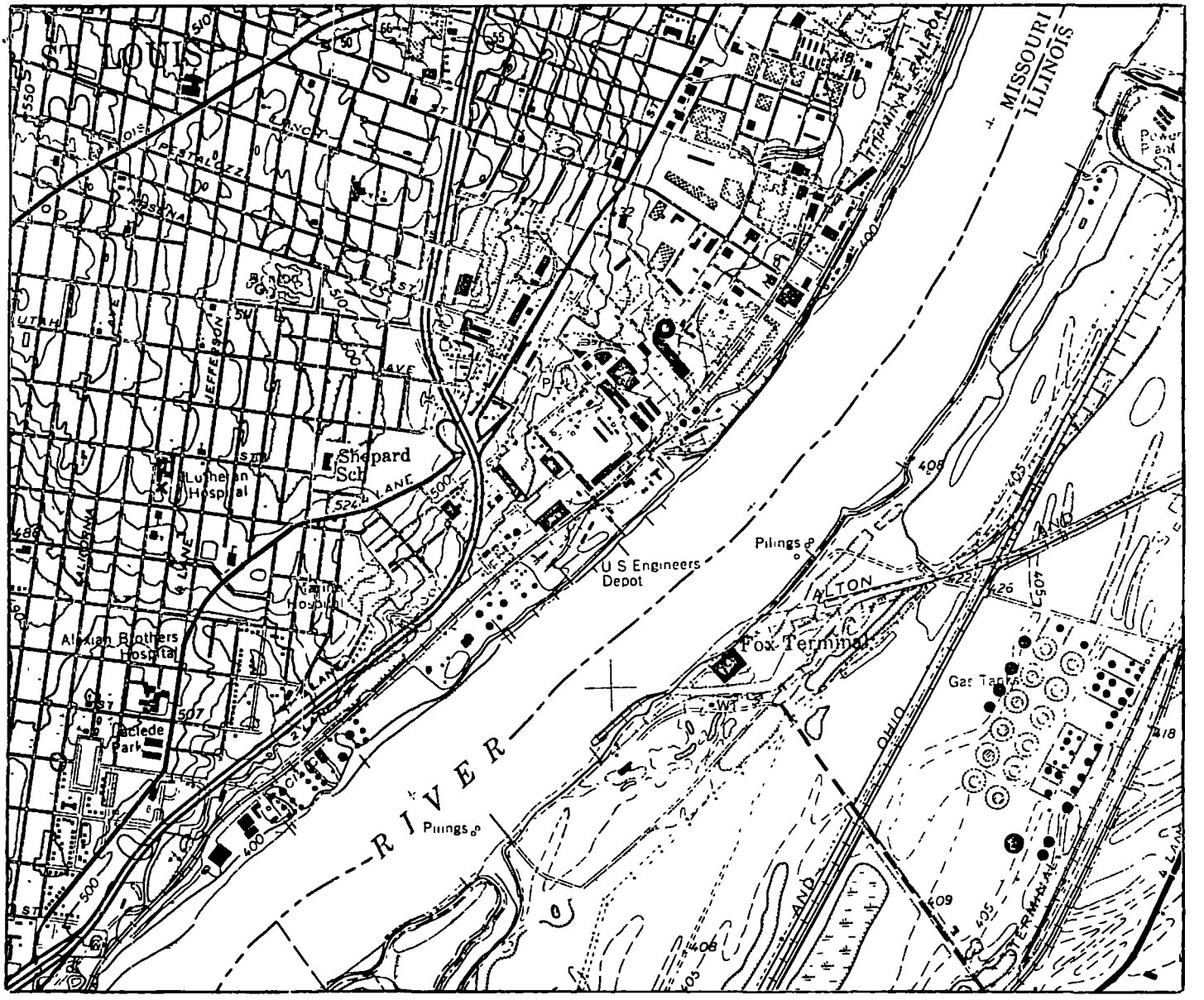
List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X') 1. YES	2. NO	3. UNKNOWN
	EPA	MOD006280119					
	State of MO.	HWG-1					
	State of MO.	HWG-6					

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

[X] NONE [ ] YES (summarize in this space)

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.



SCALE 1 24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

CAHOKIA, ILL.—MO.

N3830—W9007.5/7.5

1954

PHOTOREVISED 1968

QUADRANGLE LOCATION

REV.		
A	mm	11-5-75
B	mm	6-5-76
C	mm	4-4-79
E	mm	3-3-80

A.C.F. INDUSTRIES - AMCAR DIV.
ST. LOUIS, MO.

mm 8-14-74

ACF Industries - Amcar Division

Saint Louis, Missouri

- No scale available -

REFERENCES

Reference 1: Methodology for Rating the Hazard Potential of Waste Disposal Sites by JRB Associates, Inc.

Reference 2: Letter from G. L. Harting, Director of Manufacturing Engineering, Dated May 17, 1983.

Reference 3: Hazardous Properties of Industrial Materials by N. I. Sax.

Reference 4: U. S. Geological Survey Topographic Map, Cahokia Quadrangle, Illinois-Missouri, 7.5 Minute Series, 1954 photo revised 1968.

Reference 5: Conversations with ACF officials during site visit May 9, 1983.

Reference 6: Conversation with Mary Wehmeier, of the Occupational Health and Safety Administration, Saint Louis, Mo., June 30, 1983.

Reference 7: Background Information for Jefferson Barracks, Landfill, TDD No. F-07-8008-08.